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**From:** Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]  
**Sent:** 11/29/2017 6:08:34 PM  
**To:** Libelo, Laurence [Libelo.Laurence@epa.gov]; Lindstrom, Andrew [Lindstrom.Andrew@epa.gov]; Garvey, Mark [Garvey.Mark@epa.gov]  
**Subject:** RE: Draft GenX Paper for OECA Briefing With [REDACTED]  
**Attachments:** highlighted Chemours\_GenX\_Brochure\_Final\_07July2010.pdf

Laurence is right ...almost. The Dupont brochure calls it the "GenX processing aid" and shows the ammonium salt to be perfectly clear.

Mark

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**From:** Libelo, Laurence  
**Sent:** Wednesday, November 29, 2017 9:48 AM  
**To:** Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Garvey, Mark <Garvey.Mark@epa.gov>  
**Cc:** Strynar, Mark <Strynar.Mark@epa.gov>  
**Subject:** RE: Draft GenX Paper for OECA Briefing With [REDACTED]

Hi Mark,

DON'T SAY GENx!!

"Genx is a technology....that includes a new surfactant, the HFPO dimer acid NH<sub>4</sub> salt...."

Say "HFPO dimer acid and its NH<sub>4</sub> salt" if you only want to talk about the [REDACTED] the HFPO dimer acid detected in samples you need to say HFPO dimer acid. In water the NH<sub>4</sub> salt and other salts dissolved to form the HFPO acid ion or hexafluoropropanoate ion. This is what exists in water, not the acid or salt. This is also formed when HFPO acid fluoride, Ca salt, K salt or any other related ionic compound is put in water.

Andy, correct me if I am wrong but I think [REDACTED]

OK, Getting down off my soapbox – to answer your question -

As Andy says there is not an EPA "Standard Method" for the HFPO dimer acid. For a Standard Method like the 537 method for PFOA and PFOS the analysis procedure it has to go through a fairly long approval process. The HFPO dimer acid and related ethers have not been through the processes so there is not yet a Standard Method.

I think the 537 method took several years to get approved after the chemists had it all worked out. It was obsolete the day it was final because it was designed for analysis of a small set of PFCs in drinking water for use in the OW UCMR analysis at pretty high level. It is not designed to answer the question "What is there and how much".

As Andy says there are commercially available analytical standards so the HFPO dimer acid analysis is being done by a lot of labs. The results are good [REDACTED] The analysis is not that difficult really.

I am not sure what [REDACTED] The method Andy and Mark are using is a valid EPA method. [REDACTED]

A couple of other points – We know a lot more than we did in July.

The HFPO dimer acid precursors are clearly being discharged. [REDACTED]

Other media have been analyzed and the HFPO dimer acid is present in them as well as water. It should be noted that soil, groundwater and air also have it.

The release to air should be included. 70,000 lbs to air is significant. It means that there is widespread contamination, not just the surface water discharges.

Chemours produces the HFPO dimer acid and NH4 salt and a number of other fluoroethers that can form the HFPO [REDACTED]

It would be better to say “Chemours produces HFPO dimer acid and its NH4 salt [REDACTED]

I also would very strongly suggest that the discussion include the other fluoroethers. Some of them are a lot worse than the HFPO dimer acid.

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**From:** Lindstrom, Andrew

**Sent:** Wednesday, November 29, 2017 8:48 AM

**To:** Garvey, Mark <Garvey.Mark@epa.gov>; Libelo, Laurence <Libelo.Laurence@epa.gov>

**Cc:** Strynar, Mark <Strynar.Mark@epa.gov>

**Subject:** RE: Draft GenX Paper for OECA Briefing With [REDACTED]

Mark,

I don't think there is [REDACTED] the approach outlined in the attached paper works well.

Most importantly, there is an analytical standard available (hfpoa document attached) so lots of commercial labs are doing it now.

Please let me know if you have other questions.

Thank you,

Andy

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**From:** Garvey, Mark

**Sent:** Wednesday, November 29, 2017 8:43 AM

**To:** Libelo, Laurence <Libelo.Laurence@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>

**Subject:** FW: Draft GenX Paper for OECA Briefing With [REDACTED]

Lawrence and Andrew,

In the email below, the water staff from Region 4 says the following -

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**Ex. 7(A)**

I'm trying to figure this out. Can you help me?

Mark

**Mark Garvey**

EPA Headquarters  
Office of Civil Enforcement  
Attorney  
202-564-4168  
[garvey.mark@epa.gov](mailto:garvey.mark@epa.gov)

NOTE: This email and its attachments may contain confidential information, attorney-work product, enforcement sensitive material or privileged information.

**From:** Shell, Karrie-Jo

**Sent:** Wednesday, November 29, 2017 8:27 AM

**To:** Garvey, Mark <[Garvey.Mark@epa.gov](mailto:Garvey.Mark@epa.gov)>; Speir, Jeffrey <[speir.jeffrey@epa.gov](mailto:speir.jeffrey@epa.gov)>; Schwartz, Paul <[Schwartz.Paul@epa.gov](mailto:Schwartz.Paul@epa.gov)>; Fite, Mark <[Fite.Mark@epa.gov](mailto:Fite.Mark@epa.gov)>; Hall, Renea <[Hall.Renea@epa.gov](mailto:Hall.Renea@epa.gov)>; Jones, Aaryn <[Jones.Aaryn@epa.gov](mailto:Jones.Aaryn@epa.gov)>; George, Verne <[George.Verne@epa.gov](mailto:George.Verne@epa.gov)>; Miles, James <[miles.james@epa.gov](mailto:miles.james@epa.gov)>; Saenz, Diana <[Saenz.Diana@epa.gov](mailto:Saenz.Diana@epa.gov)>; Sullivan, Greg <[Sullivan.Greg@epa.gov](mailto:Sullivan.Greg@epa.gov)>; Duchovnay, Andrew <[Duchovnay.Andrew@epa.gov](mailto:Duchovnay.Andrew@epa.gov)>; Davis, Lauren O. <[Davis.LaurenO@epa.gov](mailto:Davis.LaurenO@epa.gov)>; Bean, Mark <[Bean.Mark@epa.gov](mailto:Bean.Mark@epa.gov)>; Schulz, Susan <[Schulz.Susan@epa.gov](mailto:Schulz.Susan@epa.gov)>; Toney, Anthony <[Toney.Anthony@epa.gov](mailto:Toney.Anthony@epa.gov)>; Bookman, Robert <[Bookman.Robert@epa.gov](mailto:Bookman.Robert@epa.gov)>  
**Cc:** Davis, Molly <[Davis.Molly@epa.gov](mailto:Davis.Molly@epa.gov)>; Allenbach, Becky <[Altenbach.Becky@epa.gov](mailto:Altenbach.Becky@epa.gov)>; Oif, Leslie <[Oif.Leslie@epa.gov](mailto:Oif.Leslie@epa.gov)>

**Subject:** RE: Draft GenX Paper for OECA Briefing With SDWA/CWA/ TSCA/RCRA

1. Minor edit: **Ex. 5 Deliberative Process (DP)**

## Ex. 5 Deliberative Process (DP)

2. The document states :”In June 2017, Chemours told North Carolina officials that it had stopped discharging GenX precursors into the Cape Fear River from the Fayetteville Works Facility.”

## Ex. 5 Deliberative Process (DP)

US EPA Region 4  
Water Protection Division  
61 Forsyth Street  
Atlanta, GA 30303  
(404) 562-9308

**From:** Garvey, Mark

**Sent:** Tuesday, November 28, 2017 5:25 PM

**To:** [REDACTED] Schwartz, Paul <Schwartz.Paul@epa.gov>; Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>; Fite, Mark <Fite.Mark@epa.gov>; Hall, Renea <Hall.Renea@epa.gov>; Jones, Aaryn <Jones.Aaryn@epa.gov>; George, Verne <George.Verne@epa.gov>; [REDACTED]  
[REDACTED] Duchovnay, Andrew <Duchovnay.Andrew@epa.gov>;  
Davis, Lauren O. <Davis.LaurenO@epa.gov>; Bean, Mark <Bean.Mark@epa.gov>; Schulz, Susan  
<Schulz.Susan@epa.gov>; Toney, Anthony <Toney.Anthony@epa.gov>; Bookman, Robert <Bookman.Robert@epa.gov>  
**Cc:** Davis, Molly <Davis.Molly@epa.gov>; Allenbach, Becky <Allenbach.Becky@epa.gov>; [REDACTED]  
[REDACTED]

**Subject:** RE: Draft GenX Paper for OECA Briefing With [REDACTED]

To Region 4 TSCA & Water teams,

**Ex. 7(A)**

Please note that this is not a meeting requesting senior management direction, but rather an informational briefing for Susan Bodine.

Thanks,  
Mark

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**Mark Garvey**  
EPA Headquarters  
Office of Civil Enforcement  
Attorney  
202-564-4168  
[garvey.mark@epa.gov](mailto:garvey.mark@epa.gov)

NOTE: This email and its attachments may contain confidential information, attorney-work product, enforcement sensitive material or privileged information.

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**From:** [REDACTED]  
**Sent:** Tuesday, November 28, 2017 12:08 PM  
**To:** Schwartz, Paul <Schwartz.Paul@epa.gov>; Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>; Fite, Mark <Fite.Mark@epa.gov>; Hall, Renea <Hall.Renea@epa.gov>; Jones, Aaryn <Jones.Aaryn@epa.gov>  
**Cc:** Davis, Molly <Davis.Molly@epa.gov>; Allenbach, Becky <Allenbach.Becky@epa.gov>; [REDACTED]  
[REDACTED]  
**Subject:** Draft GenX Paper for OECA Briefing

Hello, Region 4 Water Team:

# Ex. 7(A)

Unfortunately, the deadline to send up the briefing paper is tight. Please provide any feedback you may have to me and Mark Garvey (cc'd) by Thursday, November 30 at noon. I apologize about the timing.

Please let me know if you have any questions or if you would like to discuss this further.



Attorney-Adviser  
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